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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/721,101	11/21/2000	Rex Hill	39982/JEJ/X2	3032

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EXAMINER

MEHRA, INDER P

ART UNIT PAPER NUMBER

2666

DATE MAILED: 03/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	Application No. <b>09/721,101</b>	Applicant(s) HILL ET AL.	
	Examiner Inder P Mehra	Art Unit 2666	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 07 December 2004.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17, 19-26 and 28-35 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 21 November 2000 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

1. This is in response to application dated: 12/7/04. Out of 1-36 pending claims, claims 18, 27 and 36 are cancelled (see instant amendment dated 12/7/04), and claims 1-17, 19-26 and 28-35 are pending.

### *Claim Rejections - 35 USC § 102*

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

3. Claims 1, 3- 5, 8-11, 14-21, 23-28, and 31-36 are rejected under 35 U.S.C. 102(e) as being anticipated by **Maher,III et al (US Patent No. 6,654,373)**, hereinafter, Maher.

For claims 1, 8, 14, 18, 23 and 36, Maher discloses “a quality of service” shaping and provisioning method for a switch having plurality of ports, refer to abstract, and col. 3 lines 15-20, col. 6 lines 5-12 (102 in fig. 2), col. 7 lines 35-40, 128 of fig. 2, and col. 8 lines 14-16; method for switch having plurality of ports, refer to col. 1 lines 50-51, col. 3 lines 35-37, col. 6 lines 5-7, the method comprising the steps of :

- receiving a packet having a first priority value (fast pathon a first port of the switch (“VOIP as well as real time services such as video over the internet makes QOS a priority”, refer to col. 5 lines 18-21, “QOS processor to assign the necessary bandwidth -- --with high QOS and reliability requirements”, refer to col. 7 lines 48-50, “Data packets

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are then sent along fast data path 126 to output PHY interface 120 (port), refer to col. 8 lines 26-27 );

- determining a second priority value and a third priority value for the packet based on one or more flow properties , **as recited by claims 1, 5, 8, 11, 21, 14, 18, 19-21, 23, 27-28, 33, 35 and 36**, (refer to “process any information –the headers associated with *a particular layer* of the network ---protocols. Inferences can be made about the type of traffic (priority) ,---, such as address or port numbers, as specified at page 5 lines 28-32, col. 7 lines 57-65, col. 8 lines 29-32, and col. 12 lines 27-30;
- processing the packet on the switch based on the second priority value, refer to col. 7 lines 64-66; and col. 12 lines 27-30;
- transmitting the packet on a second port of the switch with the third priority value, refer to col. 7 lines 64-66;
- third priority value is applied in processing the packet on a device to which the switch transmits the packet, **as recited by claim 8**, (refer to “the quality of service processor on the egress route engine card ---allocates access to the physical egress ports based on packet **priority**”, refer to col. 3 lines 35-38;
- applying the third priority value to the packet prior to transmission from the switch, **as recited by claim 14**, (refer to “the quality of service processor on the egress route engine card ---allocates access to the physical egress ports based on packet **priority**”, refer to col. 3 lines 35-38.
- an access controller (“traffic flow scanning processor 140 including header processor 104 coupled to input ports 102”, refer to col. 6 lines 15-25), coupled to the input ports

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102 for receiving the inbound packet---- having an inbound priority value and a plurality of flow properties (type or protocol, of the data packet---attributes of data packet, such as source address/port and destination address/port, refer to col. 6 lines 26-30, **as recited by claim 23.**

- wherein the determining step includes a selected one of the following sub steps, refer to col. 7 lines 44-col. 8 line 6:
  - passing the first priority value;
  - forcing the first priority value to a lower priority value; and inverting the first priority value.

For claims 3, 9, 15, 26 and 31, Maher discloses all the limitations of subject matter including : “wherein the first priority value includes an inbound priority value, (“data packets are sent through fast path”, first priority, refer to col. 8 lines 25-28); and further discloses, “the second priority value which is determined based on the inbound priority value”, (internal quality based on the conclusion, refer to col. 7 lines 40-50.

For claims 4, 16, 24 and 34, Mahr discloses all the limitations of subject matter including the limitation “wherein the second priority value includes an internal priority value, and the internal priority value is used to indicate a processing priority of the packet while the packet is being processed in the switch”, refer to col. 8 lines 40-56.

For claims 5, 11, 19-21, 27-28 and 33, Maher discloses all the limitations of subject

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matter including :

- “wherein the second and third priority value is determined based on one or more flow properties including at least one value from a packet field that is not dedicated to defining QOS” ( as specified, flow properties include the values from packet fields ----may include but are not limited to source and destination addresses, such as layer 2, layer 3 and layer 4 port numbers---socket Ids, refer to page 5 lines 28-32), refer to Maher’s col. 1 lines 30-35, col. 5 lines 25-32.

For claims 10, 17, 25 and 32, Maher discloses all the limitations of the subject matter including the limitation “wherein the third priority value includes an outbound priority value and the outbound priority value is applied to the packet before the packet is transferred from the switch (The quality of service processor then sends the data packets to the switch fabric which routes the data packets to the route engine card associated with its physical egress port----- allocates access to the physical egress ports based on packet priority).

### ***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maher** as applied to claims 1, 8, 14, 18, 23 and 36 above, and further in view of **Voit et al** (US Patent No. 6,424,657), hereinafter, Voit.

For claim 2, Maher discloses all the limitations of the subject matter with the exception of the following limitation: "802.IQ tag field", which is disclosed by Voit, refer to cols. 25-26 (table 2)

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the field of "802.IQ". This capability is achieved by combining the "802.IQ" field as taught by Voit. The suggestion/motivation to do so would have been to support a number of different levels of quality of service requirements, and also to shape the downstream traffic.

6. Claims 6, 12 and 29, is rejected under 35 U.S.C. 103(a) as being unpatentable over **Maher**, as applied to claims 1, 8, 14, 18, 23 and 36 above, and further in view of **Kloth et al** (US Patent No. 6,643,260), hereinafter, Kloth.

For claims 6, 12 and 29, Maher discloses all the limitations of the subject matter with the exception of the following limitation " wherein the first priority value is mapped by a QOS shaping map into the second priority value", which is disclosed by Kloth, refer to col. 11 lines 10-16

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of priority value mapping. This capability is achieved by combining the capability as taught by Kloth. The suggestion/motivation to do so would have been to

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implement a quality of service (QoS) policy in a data communications network so as to thereby prioritize network traffic into a plurality of service levels and provide preferential treatment of different classes of data traffic on the data communications network. A number of priority levels may be implemented in accordance with the invention.

7. Claims 7, 13, 22 and 30, are rejected under 35 U.S.C. 103(a) as being unpatentable over **Maher**, as applied to claims 1, 8, 14, 18, 23 and 36 above, in view **Kloth et al** (US Patent No. 6,643,260), hereinafter, Kloth, and further in view **Wang et al** (US Patent No. 6,606,311), hereinafter, Wang.

For claims 7, 13, 22 and 30, Maher discloses all the limitations of the subject matter with the exception of the following limitation “ wherein mapping information of the QOS shaping map can be updated during operation of the switch”, refer to col. 7 lines 25-38.

It would have been obvious to a person of ordinary skill in the art at the time of the invention to use the capability of priority value mapping and updating . This capability is achieved by combining the capability as taught by Wang. The suggestion/motivation to do so would have been to implement a quality of service (QoS) policy in a data communications network so as to thereby prioritize network traffic into a plurality of service levels and provide preferential treatment of different classes of data traffic on the data communications network. A number of priority levels may be implemented in accordance with the invention.



***Response to Arguments***

8. Applicant's arguments filed 12/7/04 have been fully considered but they are not persuasive.

Applicant argues "While Maher may indicate flow priorities not dedicated to defining QOS, it does not disclose, teach or render obvious using these in QOS shaping, as is presently claimed.

In response, it is stated that "quality of service shaping" is not claimed limitation in the claim.

***In light of explanation, as above, the argument by applicant is not persuasive.***

9. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

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*Conclusion*

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Inder P Mehra whose telephone number is 571-272-3170. The examiner can normally be reached on Monday through Friday from 8AM to 5PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Seema Rao can be reached on 571-272-3174. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

*Inder Pal Mehra*

Inder P Mehra

Examiner

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3/17/05



Stamp: EXAMINER  
Inder P Mehra  
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